

**A NEW SPECIES OF NASAL MITE, NEONYSSUS
(NEONYSSUS) COLUMBAE, FROM THE PIGEON**

(ACARINA, MESOSTIGMATA, RHINONYSSIDAE)

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The mite described herein was recovered from the nasal cavities of pigeons in the vicinity of Lubbock, Texas. At first, it was thought to be either *Neonyssus* (*N.*) *melloi* de Castro or *N.* (*N.*) *serraõi* de Castro, but a closer examination disclosed differences to be noted later.

In 1948 M. P. de Castro revised the family Rhinonyssidae Vitzthum, proposing new bases for the classification of genera and subgenera; de Castro's systematics are used in this description. Briefly, the generic description is as follows: Rhinonyssidae with peritreme; chelicerae of uniform thickness from the base to the tip. The subgenus is defined as having the opistosomal shield more than half as wide as the podosomal shield. Dr. de Castro listed five species of this subgenus: *Neonyssus* (*N.*) *nucifragae* Hirst, 1923; *N.* (*N.*) *intermedius* Hirst, 1921; *N.* (*N.*) *hirsti* de Castro, 1947; *N.* (*N.*) *melloi* de Castro, 1948; and *N.* (*N.*) *serraõi* de Castro, 1948. A key to the species is included in the latter part of this paper.

***Neonyssus* (*Neonyssus*) *columbae*, new species**

A stout-legged, oval mite. Gnathosoma visible from above and small in relation to the body. Setae on legs and body much reduced.

FEMALE (figs. 1-8, 11). Body length, excluding gnathosoma, 640-730 μ ; average 678 μ . Body width, 382-455 μ ; average 416 μ . Length of leg I, 379 μ average.

VENTER (fig. 1). Sternal plate faintly visible and much reduced. Genito-ventral plate slightly elongate and marked with an X-shaped structure (fig. 3). Three pairs of short sternal setae present; five pairs of well-developed setae and four pairs of short setae present on abdomen. Striations present as illustrated. Anal plate oval, with two setae placed anterior to anal pore. The peculiar evaginated appearance of the anal pore present in all specimens examined. Cribrum extends to dorsum (fig. 7).

DORSUM (fig. 2). The two large plates cover most of the dorsum; both plates highly irregular in shape and sculpturing. No well-developed setae on plates, those present very minute. Dorsum striated as illustrated. Stigmal openings distinct; peritreme short. Margins of peritreme indistinct, apparently due to an annular or spiral thickening (fig. 8). Ten pairs of small setae on dorsum as illustrated.

LEGS. Legs rather stout; setae reduced in number. Leg IV slightly longer than others. Sclerotized areas of legs are present as illustrated, these areas more distinct on ventral portions. Shape and extent of

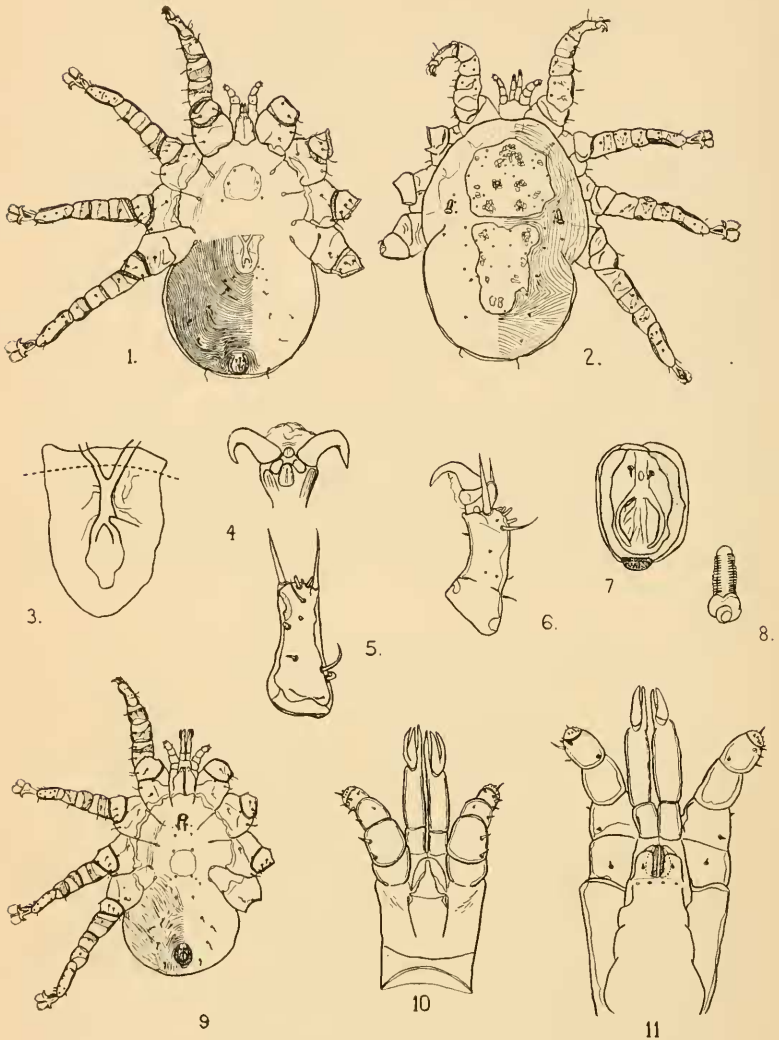


PLATE 45. NEONYSSUS COLUMBAE

Fig. 1, Ventral view of female; fig. 2, Dorsal view of female; fig. 3, Genito-ventral plate of female; fig. 4, Claw of tarsus I, female; fig. 5, Tarsus I of female, dorsal view; fig. 6, Tarsus I of female, side view; fig. 7, Anal plate of female; fig. 8, Stigma and peritreme of female; fig. 9, Ventral view of male; fig. 10, Gnathosoma of male, dorsal view; fig. 11, Gnathosoma of female, ventral view.

both dorsal and ventral sclerotized areas irregular. Setae present as illustrated. Setae on tarsi and coxae well-developed. Anterior margins of coxae of legs II and III scalloped. Tarsus I (figs. 4-6) with two rigid terminal spines projecting forward from apical portion and passing above claws. In addition, several stout setae and one attenuate seta present in apical position. Two attenuate setae are located in region of pretarsus. Claws well-developed.

GNATHOSOMA (fig. 11). Palps five-segmented and rather stout. Seta present in apical position. Two attenuate setae are located in and four tiny setae at base of these processes. Several tiny, stout setae on palp tarsus. Labrum very indistinct; it could be found on only two specimens. Chelicerae of uniform size throughout; chelae without teeth.

MALE (figs. 9, 10). Slightly smaller than female (492μ average length). Genito-ventral plate much reduced and poorly defined. Spermatophore carriers of same length as movable digit and slightly thinner. Otherwise similar to female.

HOST AND LOCALITY. The mites were recovered on three occasions from the nasal passages of *Columba domestica* in the vicinity of Lubbock, Texas, from a total of twelve pigeons. Fifteen female and eight male mites were examined for this paper.

Types: The holotype female, two paratype females and two paratype males are deposited in the U. S. National Museum.

The mites were found in large numbers on one occasion. The first group recovered contained twenty-two individuals, including males, females and two nymphs. This number is rather large for the Rhinonyssidae. One individual was found living in the same host with several trombidiform nasal mites; no ecological relationship between these two groups has been shown as yet. *Neonyssus* (*N.*) *melloi*, also a pigeon parasite, was recovered several times, but never in association with another nasal mite.

Two nymphs were collected but there is some doubt that they belong to this species. It is the intention to present the description of immature forms at a later date.

The distinguishing characters of this species include the two anal setae placed anterior to the anal pore, the evaginated appearance of the pore itself, and the X-shaped structure on the genital plate of the female.

The following key to the species was prepared entirely from the descriptions and illustrations encountered while preparing this paper; no specimens were available for examination. The author hopes that it will not prove to be too inaccurate.

KEY TO THE SPECIMENS OF THE SUB-GENUS NEONYSSUS HIRST
BASED ON FEMALE CHARACTERS

- | | | |
|----|--|-------------------------------|
| 1. | Three setae on anal plate | 2 |
| | Two setae on anal plate | 4 |
| 2. | Body rounded | 3 |
| | Body elongate; found in sparrow | <i>hirsti</i> de Castro |
| 3. | Many long, well-developed setae on venter; spurs on margin
of coxae; found in pigeon | <i>melloi</i> de Castro |
| | Few or no setae on venter, if present, very short; no spines on
margins of coxae; found in nutcracker | <i>nucifragae</i> Hirst |
| 4. | Setae on anal plate opposite anal pore | 5 |
| | Setae on anal plate anterior to anal pore; found in pigeon | <i>columbae</i> , new species |
| 5. | Sternal plate present; small mites (0.5 mm.); host? | <i>intermedius</i> Hirst |
| | Sternal plate absent; large mites (1 mm.); found in partridge
..... | <i>serraõi</i> de Castro |

ACKNOWLEDGMENT

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A NEW DAMAROMYIA, AND THE LARVA OF *D. TASMANICA*
KERTÉSZ

(DIPTERA, STRATIOMYIDAE)

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The genus *Damaromyia* was erected by Kertész (1916, Ann. Nat. Mus. Hungarici 14:195-6) for one species, *D. tasmanica* Kertész. Hardy (1931, Ann. Mag. Nat. Hist. (10)8:120) reviewed the known species, with descriptions of nine new ones and with the transfer of two others, previously described as